

FORM A

SOLICITED PROPOSAL APPLICATION FOR SPACE LIFE SCIENCES

IN RESPONSE TO ANNOUNCEMENT # _____

PLEASE FOLLOW INSTRUCTIONS CAREFULLY

LEAVE BLANK

NUMBER

REVIEW GROUP

DATE RECEIVED

1. COMPLETE TITLE OF PROJECT

2. PRINCIPAL INVESTIGATOR/PROGRAM DIRECTOR *(First, middle, and last name; degrees; position title)*

3. COMPLETE MAILING ADDRESS

*Internal Mail Code or Location
Office or Organization Division
Agency/Center, Company, or Institution
Street or P.O. Box
City, State, Zip Code*

4. TELEPHONE NUMBER
(area code, number, extension)

FAX NUMBER
E-MAIL ADDRESS

5. CONGRESSIONAL DISTRICT (U.S. ONLY)

6. SOCIAL SECURITY # (U.S. ONLY)

7. IS THIS PROPOSAL NEW RENEWAL REVISED

8. HAS THIS PROPOSAL (OR SIMILAR REQUEST) BEEN SUBMITTED TO ANY OTHER AGENCY?
 No Yes IF YES, SPECIFY AGENCY AND YEAR SUBMITTED:

9. HUMAN SUBJECTS

9a. No Yes

9b. EXEMPTION # OR IRB APPROVAL DATE _____

9c. Assurance of Compliance # _____

10. VERTEBRATE ANIMALS

10a. No Yes

10b. ACUC Approval Date _____

10c. PHS Animal Welfare Assurance # _____

11. CO-INVESTIGATORS *(First, middle, and last name; degrees)*

12. CO-INVESTIGATOR'S ORGANIZATION

13. DATES OF ENTIRE PROPOSED PROJECT PERIOD

From:
Through:

14. COSTS REQUESTED FOR FIRST 12-MONTH BUDGET PERIOD

14a. Direct Costs \$ _____
14b. Total Costs \$ _____

15. COSTS REQUESTED FOR ENTIRE PROPOSED PROJECT PERIOD

15a. Direct Costs \$ _____
15b. Total Costs \$ _____

16. APPLICANT ORGANIZATION *(Organization Name)*

17. TYPE OF ORGANIZATION (U.S. ONLY)

Non Profit For Profit *(General)* For Profit *(Small Business)* Public, Specify: Federal State Local

18. ORGANIZATION OFFICIAL TO BE NOTIFIED IF AN AWARD IS MADE *(Name, title, address and telephone number)*

19. OFFICIAL SIGNING FOR APPLICANT ORGANIZATION *(Name, title, and telephone number)*

20. PRINCIPAL INVESTIGATOR/PROGRAM DIRECTOR ASSURANCE:

I agree to accept responsibility for the scientific conduct of the project and to provide the required progress reports if a grant is awarded as a result of this application. Willful provision of false information is a criminal offense (U.S. Code, Title 18, Section 1001).

SIGNATURE OF PERSON NAMED IN 2

(In ink "Per" signature not acceptable.)

DATE

21. CERTIFICATION AND ACCEPTANCE: I certify that the statements herein are true and complete to the best of my knowledge, and accept the obligation to comply with NASA terms and conditions if a grant is awarded as the result of this application. A willfully false certification is a criminal offense (U.S. Code, Title 18, Section 1001).

SIGNATURE OF PERSON NAMED IN 17

(In ink "Per" signature not acceptable.)

DATE

PROPOSAL ABSTRACT

Principal Investigator:

Co-Investigators:

Proposal Title:

Ground-Based Research

O R

Space-Flight Experiment

Abstract

{Prepare a brief description of the application stating the broad, long-term objectives and specific aims of the proposed work. Describe concisely the research design and methods for achieving these objectives and aims. This abstract is meant to serve as a succinct and accurate description of the proposed work when separated from this application. Limit abstract to 300 words or fewer.}

Program Element Applicability:

{Place a check mark in the column next to the program that is most closely aligned with your proposal.}

SPACE HUMAN FACTORS ENGINEERING
ADVANCED LIFE SUPPORT (Bioregenerative)
ADVANCED LIFE SUPPORT (Physical/Chemical)
ADVANCED ENV. MONITORING & CONTROL

SPACE FLIGHT EXPERIMENT SUPPLEMENTARY APPLICATION FORM

This following form must be completed by all investigators proposing flight experiments. This form should be inserted into the Project Description section of the proposal. (Provide responses on additional sheets, as necessary.)

Principal Investigator _____

Proposal Title _____

Type of Flight Experiment: **Short Duration** ___ **Long Duration**

- (1) If humans are required as subjects for the proposed investigation, please list:
 - a) number of subjects
 - b) special subject restrictions, such as specific dietary regimens or fluid intake regulation
 - c) special experiment protocols, such as specific work/rest cycles or exercise
 - d) physiological variables to be measured.
- (2) If non-humans are required for the proposed investigation, please list:
 - a) scientific name of species and common name
 - b) gender, strain, age, stage, and weight (if applicable)
 - c) minimum number required, desired number, and a rationale for both
 - d) special requirements for maintenance or manipulation of the specimens.
- (3) List major hardware items required in this investigation.
- (4) Estimate access time.
 - a) Is late access needed and when (i.e., do you need to load the experiment and/or species within a certain time period before a launch)?
 - b) Is early removal needed and when (i.e., do you need to remove the experiment and/or species within a certain time period after landing? If so, please specify requirement.)?
- (5) Identify potentially hazardous materials, including biowaste.
- (6) Are there any specific conditions requested, such as air composition, humidity, temperature control, or illumination?
- (7) For Space Station experiments, estimate the maximum and minimum number of days of microgravity exposure required.
- (8) Estimate the total set of operations required to carry out the experiment in space (e.g., the number of sessions of crew activity and the time required for each session).
- (9) Estimate amount of time for crew participation with experiment before, during and after flight (e.g., data collection, crew training, etc.).

Responses (continue on additional sheets):

Form D

Checklist for Proposers

This checklist should be enclosed with the transmittal letter and annotated to indicate that the stated items have been included in the proposal package.

Principal Investigator/Program Director _____

- | | |
|---|---|
| _____ Form A: Solicited Proposal Application* | _____ Facilities and Equipment Description |
| _____ Form B: Proposal Abstract | _____ Supporting Budgetary Information (include current and pending support: list of other funded projects) |
| _____ Form US-1: Detailed 12 month Budget
(First year of support) | _____ IRB or ACUC letter/form regarding protocol approval, if applicable* |
| _____ Form US-2: Summary Budget Form | _____ Form US-3: Certification Regarding Drug-Free Workplace* |
| _____ Title Page | _____ Form US-4: Certification Regarding Debarment, Suspension, and Other Responsibility Matters* |
| _____ Project Description | _____ Form US-5: Certification Regarding Lobbying* |
| _____ Form C: Space-Flight Exp. Supplementary Information (if applicable) | _____ Appendices, if any |
| _____ Management Approach | _____ 25 copies of all material listed above |
| _____ Personnel, CVs; Biographical Summaries | _____ 3.5 inch computer diskette |

*One signed original form required.

Only one copy of the following materials needs to be submitted:

- _____ Transmittal Letter
- _____ Form D: This checklist indicates all items have been enclosed

**MULTINATIONAL SPACE STATION
HUMAN RESEARCH INFORMED CONSENT***

1. I, the undersigned, do voluntarily give my informed consent for my participation as a test subject in the following research study, test, or investigation:

NAME OF INVESTIGATION_____

MISSION TO WHICH ASSIGNED_____

PRINCIPAL INVESTIGATOR_____

RESPONSIBLE PROJECT SCIENTIST_____

I understand or acknowledge that:

- (a) This procedure is part of an investigation approved by participating agencies.
- (b) I am performing these duties as part of my employment with_____.
- (c) This research study has been reviewed and approved by the Multinational Review Board (MRB) which has also determined that the investigation involves _____ risk to the subject.
(minimal or reasonable)
- (d) Definitions:
Minimal risk means that the probability and magnitude of harm or discomfort anticipated in the research are not greater in and of themselves than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests.

Reasonable risk means that the probability and magnitude of harm or discomfort anticipated in the research are greater in and of themselves than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests, but that the risks of harm or discomfort are considered to be acceptable when weighed against the anticipated benefits and the importance of the knowledge to be gained from the research.
- (e) The research procedures were explained to me prior to the execution of this form. I was afforded an opportunity to ask questions, and all questions asked were answered to my satisfaction. A laymans description was provided to me.**
- (f) I consider myself physically and mentally qualified to participate in the investigation.
- (g) I know that I can refuse to participate in the tests at any stage of their performance, and my refusal will be honored, except in those cases when, in the opinion of the responsible physician, termination of the tests could have detrimental consequences for my health and/or the health of the other subjects. However, understanding the significance of the investigations (tests), I will give every effort to perform the full scope of the program.
- (h) In the event of injury resulting from this study, I understand that I will receive medical attention and necessary treatment. I also understand that I will be compensated for any injuries to the extent permitted under current (TBD) and the provisions of the contract between (TBD). My agreement to participate shall not be construed as a release of (TBD) or any third party from any future liability which may arise from, or in connection with, the above procedures.
- (i) Consistent with statutory and Agency-approved routine uses under the (TBD), the confidentiality of any data

obtained as a result of my participation as a research subject in this study shall be maintained, so that no data may be linked with me as an individual. However, if a life-threatening abnormality is detected, the investigator will notify me and the _(TBD)_. Such information may be used to determine the need for care or medical follow-up, which, in certain circumstances, could affect my professional (flight) status.

Test Subject

Date

2. I, the undersigned, the Principal Investigator of the investigation designated above, certify that:

- (a) I have accurately described the procedure and related risk(s) to the test subject.
- (b) The test setup involves _____ risk to the test subject as determined by the MRB.
(minimal or reasonable)
- (c) All equipment to be used has been inspected and certified for safe and proper operation.
- (d) The test subject is qualified to participate in my experiment protocol.
- (e) The test protocol has not been changed from that originally approved by the MRB.

Principal Investigator

Date

Concurrence:

Project Scientist

Date

Notes:

* This form is valid for the period including preflight, in-flight, and postflight data collection sessions for the mission. Before the first baseline data collection, the Principal Investigator will repeat the briefing concerning risks involved in the investigation. A signed, dated copy of this form with attachments must be forwarded to Chair, Multinational Review Board.

** A detailed description of the investigation will be attached to this consent form. The Principal Investigator is responsible for formulating this document, which should be in laymans terms such that the subject clearly understands what procedures will be required and the risks associated therewith. The detailed description of the research procedures must specifically list the risks associated with the procedures to be employed, the possible adverse reactions of all medications to be administered, and the risks/hazards resulting from exposure to ionizing radiation. Further, the investigator must clearly specify all forms of subject behavior interdicted by the research protocol (exercise, diet, medications, etc.).

FORM US-1

PRINCIPAL INVESTIGATOR/PROGRAM DIRECTOR: _____

DETAILED BUDGET FOR 12-MONTH BUDGET PERIOD DIRECT COSTS ONLY		FROM	THROUGH		
Duplicate this form for each year of grant support requested		DOLLAR AMOUNT REQUESTS <i>(Omit cents)</i>			
PERSONNEL <i>(Applicant Organization Only)</i>		EFFORT ON PROJECT	SALARY	FRINGE BENEFITS	TOTALS
NAME	ROLE IN PROJECT				
	Principal Investigator				
SUBTOTALS →					
CONSULTANT COSTS					
EQUIPMENT <i>(Itemize, use additional sheet if needed)</i>					
SUPPLIES <i>(Itemize by category, use additional sheet if needed)</i>					
TRAVEL	DOMESTIC				
	NON-DOMESTIC				
OTHER EXPENSES <i>(Itemize by category, use additional sheet if needed)</i>					
TOTAL DIRECT COSTS FOR FIRST 12-MONTH BUDGET PERIOD <i>(Item 14a, Form A)</i>				\$	
INDIRECT COSTS FOR FIRST 12-MONTH BUDGET PERIOD				\$	
TOTAL COSTS FOR FIRST 12-MONTH BUDGET PERIOD <i>(Item 14b, Form A)</i>				\$	

PRINCIPAL INVESTIGATOR/PROGRAM DIRECTOR: _____

BUDGET FOR ENTIRE PROJECT PERIOD DIRECT COSTS ONLY				
BUDGET CATEGORY TOTALS		1st BUDGET PERIOD	ADDITIONAL YEARS OF SUPPORT REQUESTED	
			2nd	3rd
PERSONNEL (Salary and Fringe Benefits) (Applicant organization only)				
CONSULTANT COSTS				
EQUIPMENT				
SUPPLIES				
TRAVEL	DOMESTIC			
	NON-DOMESTIC			
OTHER EXPENSES				
TOTAL DIRECT COSTS FOR EACH BUDGET PERIOD		\$	\$	\$
TOTAL INDIRECT COSTS FOR EACH BUDGET PERIOD		\$	\$	\$
TOTAL DIRECT + INDIRECT COSTS FOR EACH PERIOD		\$	\$	\$
TOTAL DIRECT + INDIRECT COSTS FOR ENTIRE PROJECT				\$

JUSTIFICATION FOR UNUSUAL EXPENSES (Detail Justification in Cost Section of Proposal)

FORM US-3

CERTIFICATION REGARDING DRUG-FREE WORKPLACE REQUIREMENTS

This certification is required by the regulations implementing the Drug-Free Workplace Act of 1988, 34 CFR Part 85, Subpart F. The regulations, published in the January 31, 1989 Federal Register, require certification by grantees, prior to award, that they will maintain a drug-free workplace. The certification set out below is a material representation of fact upon which reliance will be placed when the agency determines to award the grant. False certification or violation of the certification shall be grounds for suspension of payments, suspension or termination of grants, or government-wide suspension or debarment (see 34 CFR Part 85, Sections 85.615 and 85.620).

I. GRANTEES OTHER THAN INDIVIDUALS

A. _____ The grantee certifies that it will provide a drug-free workplace by:

- (a) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the grantee's workplace and specifying the actions that will be taken against employees for violation of such prohibition;
- (b) Establishing a drug-free awareness program to inform employees about --
 - (1) The dangers of drug abuse in the workplace;
 - (2) The grantee's policy of maintaining a drug-free workplace;
 - (3) Any available drug counseling, rehabilitation, and employee assistance programs; and
 - (4) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;
- (c) Making it a requirement that each employee to be engaged in the performance of the grant be given a copy of the statement required by paragraph (a);
- (d) Notifying the employee in the statement required by paragraph (a) that, as a condition of employment under the grant, the employee will --
 - (1) Abide by the terms of the statement; and
 - (2) Notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than five days after such conviction;
- (e) Notifying the agency within ten days after receiving notice under subparagraph (d) (2) from an employee or otherwise receiving actual notice of such conviction;
- (f) Taking one of the following actions, within 30 days of receiving notice under subparagraph (d) (2), with respect to any employee who is so convicted --
 - (1) Taking appropriate personnel action against such an employee, up to and including termination; or
 - (2) Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or Local health, Law enforcement, or other appropriate agency;
- (g) Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs (a), (b), (c), (d), (e), and (f).

B. _____ The grantee shall insert in the space provided below the site(s) for the performance or work done in connection with the specific grant: Place of Performance (Street address, city, county, state, zip code)

_____ Check _____ if there are workplaces on file that are not identified here.

II. GRANTEES WHO ARE INDIVIDUALS

The grantee certifies that, as a condition of the grant, he or she will not engage in the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance in conducting any activity with the grant.

Organization Name AO or NRA Number and Title

Printed Name and Title of Authorized Representative

Signature Date

Printed Principal Investigator Name Proposal Title

**CERTIFICATION REGARDING
DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS
PRIMARY COVERED TRANSACTIONS**

This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, 34 CFR Part 85, Section 85.510, Participants' responsibilities. The regulations were published as Part VII of the May 28, 1988 Federal Register (pages 19160-19211). Copies of the regulations may be obtained by contacting the U.S. Department of Education, Grants and Contracts Service, 400 Maryland Avenue, S.W. (Room 3633 GSA Regional Office Building No. 3), Washington, D.C. 20202-4725, telephone (202) 732-2505.

A. The applicant certifies that it and its principals:

- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- (b) Have not within a three-year period preceding this application been convicted or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or Local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- (c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or Local) with commission of any of the offenses enumerated in paragraph A.(b) of this certification; and
- (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or Local) terminated for cause or default; and

B. Where the applicant is unable to certify to any of the statements in this certification, he or she shall attach an explanation to this application.

C. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lowered Tier Covered Transactions (Subgrants or Subcontracts)

- (a) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principles is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department of agency.
- (b) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

Organization Name AO or NRA Number and
Title

Printed Name and Title of Authorized Representative

Signature Date

Printed Principal Investigator Name Proposal Title

CERTIFICATION REGARDING

LOBBYING

As required by S 1352 Title 31 of the U.S. Code for persons entering into a grant or cooperative agreement over \$100,000, the applicant certifies that:

- (a) No Federal appropriated funds have been paid or will be paid by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, in connection with making of any Federal grant, the entering into of any cooperative, and the extension, continuation, renewal, amendment, or modification of any Federal grant or cooperative agreement;
- (b) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting an officer or employee of any agency, Member of Congress, an or an employee of a Member of Congress in connection with this Federal grant or cooperative agreement, the undersigned shall complete Standard Form - LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- (c) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subgrants, contracts under grants and cooperative agreements, and subcontracts), and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by S1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Organization Name

AO or NRA Number and title

Printed Name and Title of Authorized Representative

Signature

Date

Printed Principal Investigator Name

Proposal Title

NASA Research Announcement (NRA) Mailing List Update

Please use this form to update information for the NASA Office of Life & Microgravity Sciences & Applications (OLMSA) NRA mailing list. Please fill out **CONTACT INFORMATION** and **PROGRAM AREAS/DISCIPLINES** completely. Forms with incomplete addresses and/or without a Program or Discipline checked will not be accepted. Please fold the form, secure with tape (do not staple), and mail it back to the address on the reverse side. Proper postage must be applied.

Mailing list updates may also be submitted electronically via E-Mail or World Wide Web to the following addresses:

E-Mail: loi@hq.nasa.gov

World Wide Web: <http://peer1.idi.usra.edu/>

Please send me notifications of announcements via E-Mail only. See my E-Mail address below.

Check one:

- | | |
|---|---|
| <input type="checkbox"/> 1. Please ADD my name to the mailing list. | <input type="checkbox"/> 3. Please CHANGE my current listing (please attach mailing label). |
| <input type="checkbox"/> 2. Please REMOVE my name from the mailing list (please attach mailing label). | <input type="checkbox"/> 4. Please leave my current listing UNCHANGED (please attach mailing label). |

Contact Information

If your address has changed or your mailing label is incorrect, please provide COMPLETE contact information.

Prefix: (Mr., Mrs., Ms., Dr., Professor, etc.)	Suffix: (M.D., Ph.D., Jr., III, etc.)
Internet/E-Mail:	
Name, First:	Last:
Position Title:	
Mail Code, Loc:	
Office, Dept, Div:	
Org (Agency/Ctr, Univ):	
Street or PO Box:	
City:	State:
Zip Code:	Country:
Telephone No:	Fax No:

Institution Type

- | | | |
|--|---|---|
| <input type="checkbox"/> 1. College or University | <input type="checkbox"/> 4. NASA Center | <input type="checkbox"/> 7. Small Business |
| <input type="checkbox"/> 2. Minority College or University | <input type="checkbox"/> 5. Other Government Agency | <input type="checkbox"/> 8. Private Industry |
| <input type="checkbox"/> 3. Minority Business | <input type="checkbox"/> 6. Nonprofit Corporation | <input type="checkbox"/> 9. Foreign Addressee |

Program Areas/Disciplines

(check main area of interest)

1. Life Sciences

- | | |
|--|---|
| <input type="checkbox"/> A. Advanced Life Support
<input type="checkbox"/> B. Advanced Technology Development
<input type="checkbox"/> C. Data Analysis
<input type="checkbox"/> D. Environmental Health
<input type="checkbox"/> E. Human Factors | <input type="checkbox"/> F. NSCORT
<input type="checkbox"/> G. Space Biology
<input type="checkbox"/> H. Space Radiation Health
<input type="checkbox"/> I. Space Space Physiology & |
|--|---|

2. Microgravity Sciences

- | |
|--|
| <input type="checkbox"/> A. Biotechnology
<input type="checkbox"/> B. Combustion Science
<input type="checkbox"/> C. Fluid Physics
<input type="checkbox"/> D. Fundamental Physics
<input type="checkbox"/> E. Materials Science |
|--|